



## **NUCLEAR REGULATORY COMMISSION**

**[Docket No. 50-305; NRC-2014-0219]**

### **Environmental Assessment and Finding of No Significant Impact:**

**Dominion Energy Kewaunee**

**Kewaunee Power Station**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Environmental assessment and finding of no significant impact; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of exemptions in response to a request from Dominion Energy Kewaunee (DEK, the licensee), which would permit the licensee to reduce its emergency planning (EP) activities at the Kewaunee Power Station. Kewaunee Power Station has been permanently shut down and defueled since May of 2013. The licensee is seeking exemptions that would eliminate the requirements to maintain offsite radiological emergency plans and reduce some of the onsite emergency planning activities based on the reduced risks at the permanently shutdown and defueled reactor. Offsite emergency planning provisions would still exist using a comprehensive emergency management plan process. The NRC staff is issuing a final Environmental Assessment (EA) and final Finding of No Significant Impact (FONSI) associated with the proposed exemptions.

**ADDRESSES:** Please refer to Docket ID **NRC-2014-0219** when contacting the NRC about the availability of information regarding this document. You may obtain publicly-available information related to this document using any of the following methods:

- **Federal Rulemaking Web site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2014-0219**. Address questions about NRC dockets to Carol Gallagher;

telephone: 301-287-3422; e-mail: [Carol.Gallagher@nrc.gov](mailto:Carol.Gallagher@nrc.gov). For technical questions, contact the individual listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):**

You may obtain publicly available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "[ADAMS Public Documents](#)" and then select "[Begin Web-based ADAMS Search](#)." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). The ADAMS accession number for each document referenced in this notice (if that document is available in ADAMS) is provided the first time that a document is referenced.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

**FOR FURTHER INFORMATION CONTACT:** William Huffman, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-2046; e-mail: [William.Huffman@nrc.gov](mailto:William.Huffman@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

Kewaunee Power Station (KPS) is a permanently shutdown and defueled power reactor in the process of decommissioning. The KPS is located on approximately 900 acres in Carlton (Kewaunee County), Wisconsin, 27 miles southeast of Green Bay Wisconsin. Dominion Energy Kewaunee is the holder of Renewed Facility Operating License No. DPR-43 for KPS. On May 7, 2013, the KPS reactor was permanently shut down. On May 14, 2014, the KPS reactor was permanently defueled. As a permanently shutdown and defueled facility, and pursuant to

§ 50.82(a)(2) of Title 10 of the *Code of Federal Regulations* (10 CFR), KPS is no longer authorized to operate the reactor or emplace fuel into the reactor vessel, but is still authorized to possess and store irradiated nuclear fuel. Irradiated fuel is currently stored onsite at KPS in a spent fuel pool (SFP) and in Independent Spent Fuel Storage Installation dry casks. The licensee has requested exemptions from certain EP requirements in 10 CFR part 50, "Domestic Licensing of Production and Utilization Facilities," for KPS. The NRC's regulations concerning EP do not recognize the reduced risks after a reactor is permanently shutdown and defueled. A permanently shutdown reactor must continue to maintain the same EP requirements as an operating reactor. To establish a level of EP commensurate with the reduced risks, DEK requires exemptions from certain EP regulatory requirements before it can change its emergency plans.

The NRC is considering issuance of exemptions to DEK from portions of 10 CFR 50.47 and 10 CFR part 50, appendix E, which would permit DEK to modify its emergency plan to eliminate most licensee required offsite radiological EP activities at KPS. Consistent with 10 CFR 51.21, the NRC has reviewed the requirements in 10 CFR 51.20(b) and 10 CFR 51.22(c) and determined that an environmental assessment is the appropriate form of environmental review for the requested action. Based on the results of the environmental assessment, which is provided in Section II below, the NRC is issuing this final finding of no significant impact.

## **II. Environmental Assessment**

### *Identification of the Proposed Action:*

The proposed action would exempt DEK from meeting certain requirements set forth in 10 CFR 50.47, "Emergency plans," and appendix E to 10 CFR part 50, "Emergency Planning and Preparedness for Production and Utilization Facilities." More specifically, DEK requested

exemptions from certain requirements in 10 CFR 50.47(b) regarding onsite and offsite emergency response plans for nuclear power reactors; from certain requirements in 10 CFR 50.47(c)(2) to establish plume exposure and ingestion pathway EP zones for nuclear power reactors; and from certain requirements in 10 CFR part 50, appendix E, section IV, which establishes the elements that make up the content of emergency plans. The proposed action would result in the elimination of the requirements for the licensee to maintain offsite radiological emergency plans and reduce some of the onsite emergency planning activities at KPS based on the reduced risks at the permanently shutdown and defueled reactor. However, requirements for certain onsite capabilities to communicate and coordinate with offsite response authorities will be retained. If necessary, offsite protective actions could still be implemented using a comprehensive emergency management plan (CEMP) process. A CEMP in this context, also referred to as an emergency operations plan (EOP), is addressed in the Federal Emergency Management Agency's (FEMA) Comprehensive Preparedness Guide 101, "Developing and Maintaining Emergency Operations Plans." Comprehensive Preparedness Guide 101 is the foundation for State, territorial, tribal, and local emergency planning in the United States. It promotes a common understanding of the fundamentals of risk-informed planning and decision making and helps planners at all levels of government in their efforts to develop and maintain viable, all-hazards, all-threats emergency plans. An EOP is flexible enough for use in all emergencies. It describes how people and property will be protected; details who is responsible for carrying out specific actions; identifies the personnel, equipment, facilities, supplies and other resources available; and outlines how all actions will be coordinated. A comprehensive emergency management plan is often referred to as a synonym for "all hazards planning."

The proposed action is in accordance with the licensee's application dated July 31, 2013, "Request for Exemptions from Portions of 10 CFR 50.47 and 10 CFR part 50, appendix E" (ADAMS Accession No. ML13221A182), as supplemented by letters dated December 11,

2013 and January 10, 2014. In its letter dated December 11, 2013 (ADAMS Accession No. ML13351A040), DEK provided responses to the NRC staff's request for additional information concerning the proposed exemptions. In its letter dated January 10, 2014 (ADAMS Accession No. ML14016A078), DEK provided supplemental information applicable to inventory makeup strategies for mitigating the loss of water in the SFP.

*The Need for the Proposed Action:*

The proposed action is needed for DEK to revise the KPS emergency plan to reflect the permanently shutdown and defueled status of the facility. The EP requirements currently applicable to KPS are for an operating reactor. Because the 10 CFR part 50 license for KPS no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel, as specified in 10 CFR 50.82(a)(2), the occurrence of postulated accidents associated with reactor operation is no longer credible. Analyses of the remaining credible accidents, as documented in the KPS Updated Safety Analysis Report, show that any releases beyond the site boundary would be below the Environmental Protection Agency (EPA) Protective Action Guides (PAGs) exposure levels, as detailed in EPA's "Protective Action Guides and Planning Guidance for Radiological Incidents," dated March 2013, which was issued as a Draft for Interim Use and Public Comment.

In addition, DEK analyzed certain beyond design basis accidents that were used as criteria by the NRC staff in granting similar exemptions to previous permanently shutdown and defueled reactors transitioning to decommissioning. An analysis by DEK concluded that as of September 20, 2014, KPS could lose the designed SFP heat removal systems for 26 days and still maintain three feet of water over the fuel with no operator action. Another DEK analysis concluded that, as of October 30, 2014, if water in the SFP were drained, such that all possible modes of cooling were lost (convection, conduction, and thermal radiation), there would be at

least 10 hours of time available to: (1) initiate actions to mitigate the event and preclude any offsite radiological release or; (2) initiate appropriate protective actions for the public.

Based on these analyses, the licensee states that application of the regulation in its particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule. Dominion Energy Kewaunee also states that it would incur undue costs in the application of operating plant EP requirements for the maintenance of an emergency response organization in excess of that actually needed to respond to the diminished scope of credible accidents.

*Environmental Impacts of the Proposed Action:*

The staff concluded that the exemptions, if granted, will not significantly increase the probability or consequences of accidents at KPS in its permanently shutdown and defueled condition. No changes are being made in the types of effluents that may be released offsite. There is no significant increase in the amount of any effluent released offsite. There is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential non-radiological impacts, the proposed action does not have any foreseeable impacts to land, air, or water resources, including impacts to biota. In addition, there are also no known socioeconomic or environmental justice impacts associated with the proposed action. Therefore, there are no significant non-radiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

*Environmental Impacts of the Alternatives to the Proposed Action:*

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the “no-action” alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

*Alternative Use of Resources:*

The action does not involve the use of any different resources than those previously considered in the “Generic Environmental Impact Statement for License Renewal of Nuclear Plants Regarding Kewaunee Power Station, Final Report,” NUREG-1437, Supplement 40, dated August 2010 (ADAMS Accession No. ML102150106).

*Agencies or Persons Consulted:*

The NRC staff did not enter into consultation with any other Federal Agency or with the State of Wisconsin regarding the environmental impact of the proposed action. On September 16, 2014, the Wisconsin State's representative was notified of this EA and FONSI and did not provide any comments on the proposed action.

**III. Finding of No Significant Impact**

The licensee has proposed exemptions from certain requirements in 10 CFR 50.47(b) regarding onsite and offsite emergency response plans for nuclear power reactors; from certain requirements in 10 CFR 50.47(c)(2) to establish plume exposure and ingestion pathway EP zones for nuclear power reactors; and from certain requirements in 10 CFR part 50, appendix E, section IV, which establishes the elements that make up the content of emergency plans. The proposed action would result in the elimination of the requirements for the licensee to maintain

offsite radiological emergency plans and reduce some of the onsite emergency planning activities at KPS based on the reduced risks at the permanently shutdown and defueled reactor. However, requirements for certain onsite capabilities to communicate and coordinate with offsite response authorities will be retained.

The NRC staff decided not to prepare an Environmental Impact Statement for the proposed action. On the basis of the environmental assessment included in Ssection II above and incorporated by reference in this finding, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC staff has determined that a finding of no significant impact is appropriate.

This assessment is based on the licensee's letter dated July 31, 2013, as supplemented by letters dated December 11, 2013, and January 10, 2014. The KPS Supplemental Generic Environmental Impact Statement for License Renewal, dated August 2010, was also considered in this review. Otherwise, there are no other environmental documents associated with this review. These documents are available for public inspection as indicated above.

Dated at Rockville, Maryland, this 26<sup>th</sup> day of September, 2014.

For the Nuclear Regulatory Commission.

**Douglas A. Broaddus,**  
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